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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------------|---------------------|------------------|
| 09/435,256 | 11/05/1999 | THYAGARAJAN BALASUBRAMANIAN | D/99729Q | 4969 |

7590 03/24/2004
JOHN E BECK
XEROX CORPORATION
XEROX SQUARE 20A
ROCHESTER, NY 14644

EXAMINER

RAHIMI, IRAJ A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2622

DATE MAILED: 03/24/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/435,256

Applicant(s)

BALASUBRAMANIAN ET AL.

Examiner

(Iraj) Alan Rahimi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-11 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5 is/are rejected.
- 7) ☒ Claim(s) 3,4,6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In papers filed on January 9, 2004, applicant added new claims 8-11. These claims are combination of the original independent claims plus the allowable subject matter.

Response to Arguments

2. Applicant's arguments with respect to claims 1,2 and 5 have been considered but are moot in view of the new ground(s) of rejection. This action is Non-Final.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh in view of Yabe (US patent 6,359,703).

Regarding claim 1, Itoh discloses a method of selecting a filter for control of a gamut mapping correction process, including:

determining a filter selection metric in accordance with measured local image activity (column 4, lines 10-23. 8x8 matrix is considered local image area where filtering criteria is based on.);

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changing filter parameters as a function of the determined filter selection metric (column 3, lines 65-67; column 4, lines 46-67 and column 6, lines 1-16).

Although Itoh discloses filtering out the noise due generated by coding of the image data, he does not specifically disclose coding the image data for purpose of gamut mapping. Yabe discloses an image processor that includes a gamut mapping device. Yabe discloses in column 3, lines 32-61 a color gamut mapping coefficient, masking coefficient and filter coefficient set by CPU based on image signal distribution. Image signal distribution could be from the edge or rest of the image. Examiner considers this also as local measured activity. The type of filtering performed is based on the data representing the edges or the rest of image. Itoh and Yabe are analogous art because they are from the same field of endeavor that is use of filters in image processing. Therefore, it would have been obvious to a person skilled in the art, at the time of invention to use Yabe's invention with Itoh to obtain high-quality image reproduction.

Regarding claim 2, Itoh discloses a method as described in claim 1, wherein said local image activity metric varies between low activity, corresponding to flat areas within an image, and high activity, corresponding to strong edge areas with an image (column 5, lines 64-67 and column 6, lines 1-16. Homogeneous regions are considered low activity areas and heterogeneous regions are considered high activity area.

Regarding claim 5, Itoh discloses a method as derived in claim 1 wherein said varied filter parameter is filter size in terms of pixels covered in a single operation thereof (column 3, lines 31-36).

Allowable Subject Matter

5. Claims 3, 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7-11 are allowed for having the objected claims incorporated in the independent claims.

Other Prior Art Cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakauchi et al. (US patent 6,198,843) discloses method and apparatus for color gamut mapping.


Contact Information

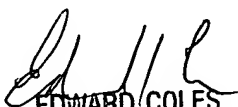
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Iraj) Alan Rahimi whose telephone number is 703-306-3473. The examiner can normally be reached on Mon.-Fri. 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L Coles can be reached on 703-305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Alan Rahimi
March 22, 2004


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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600